

## ABSTRACT OF THE DISCLOSURE

A method and an apparatus for current supply of an electronically commutated electric motor by a semiconductor power end stage are described, which has an arrangement for ascertaining the current received by the motor and  
5 an electronic controller for controlling the branch currents of the motor. For this purpose the electronic controller receives an input signal from a single current sensor (24) in a common conductor (26) of the semiconductor switches of the end stage, the terminal voltages ( $U_1$ ,  $U_2$ ,  $U_3$ ) of the individual branch windings (16, 18, 20) as well as the total voltage ( $U$ ) applied to the end stage. From these  
10 input voltages and the input signal the electronic controller determines respective voltage drops at the individual semiconductor switches under logical incorporation of control signals ( $G_1 - G_6$ ) produced by the electronic controller. For the voltage drop at a particular semiconductor switch its respective conducting state D.C. resistance can be ascertained, so that additional current  
15 sensors in the individual branches for controlling the branch currents ( $I_1$ ,  $I_2$ ,  $I_3$ ) are not necessary.